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LARSON NEWMAN & ABEL, LLP			EXAMINER	
5914 WEST COURTYARD DRIVE			YOON, TAE H	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/823,400	Applicant(s) BAUER ET AL.
	Examiner Tae H. Yoon	Art Unit 1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 19 July 2010.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1,4,7,10-22,24,26-34 and 55-64 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,4,7,10-22,24,26-34 and 55-64 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 7/19/10

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date: _____

5) Notice of Informal Patent Application
 6) Other: _____

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 4, 7, 10-22, 24, 26-34 and 55-64 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Rejection is maintained for reason of record with following response.

Applicant asserts that one would measure the properties after the coating stabilizes, and applicant had stated that said stabilized values are obtained by performing the test after 72 hours at upper portion of page 13 in the last response. However, the specification failed to teach such test adequately and Fig. 1 shows the viscosity profile at 2 to 72 hours, but there is no teaching that said flow and leveling and sag resistance were measured after 72 hours (which includes 100 and 200 hours) for the data in table 1 of the specification.

Claims 1, 4, 7, 10-22, 24, 26-34 and 55-64 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the coating composition comprising the recited components and amounts thereof in examples, does not reasonably provide enablement for the recited component. The specification does not

enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Rejection is maintained for reason of record with following response.

Claims 1, 22 and 59 now recite a paint, enamel and adhesive (claim 59 further recite polymer(s), pigment, defoamer and dispersant), but such recitation failed to overcome the rejection since particular components and amounts thereof are missing from said claims 1 and 22 and claim 59 does not recite amounts either.

Applicant asserts that the examiner failed to consider the eight factors identified by the court, but such assertion lacks probative value since the examiner had responded to said eight factors which are repeated below with additional responses:

A. Breadth of Claims; Applicant asserts that the broadest reasonable interpretation should be consistent with the specification and that the specification does not include cosmetics. But, such assertion lacks probative value since the examiner does not find any teaching that the cosmetics are excluded and since the cosmetics falls within scope of the disclosed surface protectants, cosmetics protect skin (surface) from UV, for example.

The recited properties cannot be stand alone and they are dependent on particular components of a composition. **Note that the rejection is based on the scope of enablement, not enablement per se.** Dependent claims (acrylic polymer of claim 3, 0.5-10 or 0.5-2 wt.% of boehmite of claims 10 and 11 and a generic paint of claims 61, 63 and 64) also do not overcome the rejection and applicant failed to provide

why they are patentable over the independent claims. Note that the examiner had not questioned the species of boehmite (activated boehmite).

Applicant asserts that species of polymer, the type of surface coating, a species of bohemite, compositional ranges of bohemite and additional properties of the surface coating were not considered by the examiner, but said dependent claims would not overcome the rejection for obvious following reasons:

1. Only acrylic polymer is recited in claim 4 and said acrylic alone is not sufficient for a paint, for example, which would require various additives and amounts thereof such as high pigment loading, coalescent, surfactant, defoamer, water/solvents, to name a few.
2. A minimum amount of 0.5% of boehmite in 2% acrylic emulsion would not yield the recited properties.
3. Again, physical properties of the boehmite in claims 14-19 alone, for example, would not change properties of a composition comprising 0.5% of boehmite and 2% acrylic emulsion much.
4. The recitation of the coating properties in the dependent claim would not remedy the issues involved in the independent claim.
5. Applicant asserts that the examiner failed to articulate analysis of the dependent claims for enablement. But, the enablement of the dependent claims would be dependent on the independent claim (generic claim) since the instant dependent claims do not remedy the issues/problems of the independent claim (generic claim)

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pointed out by the examiner. Also, applicant failed to point out which dependent claims remedy said issues/problems of the independent claim (generic claim).

B. Nature of the invention, State of the Art and Level of Skill in the art;

1. The nature of the invention is not clear contrary to applicant's statement since applicant's attempt that the cosmetics are excluded from the invention which lacks probative value as the reason given above.

2. State of the art; even though the prior art teach employing boehmite particles, the prior art do not recognize that the activated boehmite provides a balanced thickening effect with the recited properties. Thus, it would not be mature.

3. Level of Skill in the art; addition of various thickeners to a coating composition is known and thus the level of skill in the art is not considered high contrary to applicant's assertion.

C. Level of Predictability in the art; again, applicant asserts that what is well-known is best omitted, but such assertion has little probative value since it is not well-known what the claimed polymeric emulsion would encompass. A surface coating solution includes paints, surface protectants and adhesive discussed in specification and it also includes cosmetic, for example since the cosmetic paints a part of face of a human. Polymers can be various water soluble and water-dispersible polymers.

Applicant's examples show paints with an acrylic binder with high amount of pigment and various other additives which already possess decent values for flow and leveling and sag resistance without the instant boehmite particles. Various binders for paints

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are known such as acrylic, alkyd, urethane and paints having various properties are also well known such as wall or ceiling paint, flat, semi-gloss, gloss, high sheen and/or low sheen, for example, even without considering amount of the binder and pigment and other additives. Thus, the scope of the claimed composition is not well-known as asserted by applicant.

Applicant asserts that the relationship of flow and leveling and sag resistance is predictable since varying amount of conventional thickeners provides an inverse relationship, but the examiner disagrees with applicant since the data in table 5 and 6 of the 1.132 declaration (8/17/09) is hardly considered the inverse relationship. Furthermore, applicant now states that the recited flow and leveling and sag resistance is based on the stabilized solution (after 72 hours) and thus the method (after 24 hours) used in said 1.132 declaration lacks probative value. The examiner disagrees with applicant's statement that a reasonable amount of experimentation would be needed in producing a surface coating commensurate in scope with the present claims since the nature of the claimed surface coating is not taught adequately other than one base paint composition containing a large amount of pigments and other additives which already possesses good flow and leveling and sag resistance.

Furthermore, the paint compositions in tables 5 and 6 in said 1.132 declaration fall within scope of claimed composition (a polymeric emulsion and particular (small) amount of activated boehmite (a base compound inherently activates boehmite)), but fail to produce the instant flow and leveling and sag

resistance. That is another evidence for unpredictability which would require undue experimentation.

Contrary to applicant assertion, the prior art teach the use of activated boehmite since the compositions of the prior art contain a base which inherently activates said boehmite and thus applicant's assertion that one skilled in the art recognize the invention after reading the applicant's disclosure lacks probative value. One does not need to recite inherent properties. A realization of the inherent property alone does not warrant a patent. **Applicant failed to respond to the instant paragraph.**

Applicant also asserts that the exemplary formulas in which a component can be used are common as evidenced by UCAR Latex 379G brochure. Said brochure suggests possible formulations with addition components and amounts thereof, but the instant claim do not recite such composition and thus applicant's reliance on said brochure has little probative value. For example, the broadest compositional limitation of claim 1 is an adhesive comprising a few % of an emulsion polymer and 0.1 wt% of boehmite particles. Again, a paint, an enamel or an adhesive composition must have good physical properties including the recited flow and leveling and sag resistance properties before adding the recited amount of boehmite particles, but this is not case here.

D. Amount of Direction, Existence of Working Examples and Quantity of Experimentation; the use of one base paint composition containing a large amount of

pigments and other additives which already possesses good flow and leveling and sag resistance is taught. Thus, such showing failed to meet said recited parameters.

Again, undue experimentation (*In re Wand*, 858 F.2d at 737, 8 USPQ2d at 1404 (Fed. Cir. 1988) would be needed in order to find out the recited properties for different compositions (components and amounts thereof). The mandatory components recited in the claims are only a polymer in an emulsion (or latex) without any particular polymer (except claim 4 but the recited acrylic is still very broad) and amount thereof and 0.1 to 20.0 wt% of the recited boehmite particles. Thus, a composition comprising 1 wt% of any polymeric latex and 0.1 wt% of the recited boehmite particles falls within scope of the instant claims but such composition would not yield the recited properties and applicant failed to show otherwise. Claim 59 recites an acrylic emulsion, a styrene modified acrylic emulsion or a polyvinyl acetate emulsion with three additional components **without any amount thereof** and thus said claim 59 fails to overcome the rejection.

Applicant asserts that the claims recite a composition and properties associated with the composition and that such properties are part of the scope of the claims. The examiner agrees with applicant's statement that the composition and properties are related to each other, but the recited properties are based on the particular composition having reasonable base properties such as known commercial paints used in applicant's 1.132 declaration (8/17/09), not any polymer emulsion recited in the instant claim, by adding the recited amount of boehmite particles. A polymeric emulsion

composition without having reasonable base properties will not yield the recited properties by just adding the recited amount of boehmite particles.

Had applicant shown that a composition comprising 2 wt% of an acrylic polymer emulsion which falls within the scope of the instant claim and 0.1 or 5 wt% of the recited boehmite particles have yielded the instantly recited properties, the examiner's instant position would have been weak, but that is not case here. Applicant also asserts that what is well-known is best omitted, but such assertion has little probative value since it is not known what the claimed polymeric emulsion would encompass. A surface coating solution includes paints, surface protectants and adhesive discussed in specification and it also includes cosmetic, for example. Polymers can be various water soluble and water-dispersible polymers. Applicant's examples show paints with an acrylic binder with high amount of pigment and various other additives which already possess decent values for flow and leveling and sag resistance without the instant boehmite particles. Various binders for paints are known such as acrylic, alkyd, urethane and paints having various different properties are also well known such as wall or ceiling paint, flat, semi-gloss, gloss, high sheen and/or low sheen, for example, even without considering amount of the binder and pigment and other additives. Thus, the scope of the claimed composition is not well-known as asserted by applicant.

An addition of 0.1-20 wt% of the recited boehmite particles in any polymeric emulsion with a low concentration alone would not yield the instant properties and such properties are dependent on various other factors such as polymers, pigments, surfactants, non-associative thickeners (such as colloidal clay or silica), co-solvents

other than water and amounts thereof, to name a few, but such limitations are absent from the instant claims.

Also, applicant has stated that improvements in flow and leveling often comes with a sacrifice to sag resistance and vice-versa at the bottom of page 8 in said 1.132 declaration, and such statement is the proof that the results are unpredictable which would require undue experimentation.

In summary, applicant is asking the third party to figure the claimed composition having the recited properties of flow and leveling and sag resistance out rather than presenting enabling claims which provides the third party with a clear compositional limitation.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 4, 7, 10-22, 24, 26-34 and 55-64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited values for flow and leveling and sag resistance are indefinite absent the time of measurement since applicant's 1.132 declaration filed on February 10, 2009 shows that such values would change with time (see an example with Catapal D in Table D2).

Applicant states that "stabilized" means "after 72 hours", but such limitation lacks antecedent basis in specification and thus it is indefinite. Applicant asserts that one would measure the properties after the coating stabilizes, and applicant had stated that said stabilized values are obtained by performing the test after 72 hours at upper portion of page 13 in the last response. However, the specification failed to teach such test adequately and Fig. 1 shows the viscosity profile at 2 to 72 hours, but there is no teaching that said flow and leveling and sag resistance were measured after 72 hours (which includes 100 and 200 hours) for the data in table 1 of the specification.

Thus, it is confusing and indefinite.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4, 7, 10-22, 24, 26-34 and 55-64 are rejected under 35 U.S.C. 103(a) as obvious over Elsik et al (US 5,550,180) and Bugosh (US 2,915,475), and in view of Gemon et al (US 2006/0106129 A1).

Rejection is maintained for reason of record with following response.

Applicant states that the recited values are based on the measurement after 72 hours, but **the declaration shows the measurement after 24 hours**. Thus, it failed to overcome the rejection.

An invention in a product-by-process is a product, not a process. See *In re Brown*, 459 F2d 531, 173 USPQ 685 (CCPA 1972) and *In re Thorpe*, 777 F2d 695, 697, 227 USPQ 964 (Fed. Cir. 1985). Thus, the recited process of new claims 60 and 62 lacks probative value.

Applicant asserts unexpected result, but whether an applicant seeks to establish an unobvious difference to overcome an inherency finding or unexpectedly improved results to overcome an obviousness conclusion, the objective evidence an applicant provides must be commensurate in scope with the claims which the evidence is offered to support. In other words, the showing must be reviewed to see if the results occur over the entire claimed range. *In re Marosi*, 710 F.2d 799, 803 (Fed. Cir. 1983); *In re Clemens*, 622 F.2d 1029, 1035-36 (CCPA 1980); *In re Peterson*, 315 F.3d 1325, 1330-31 (Fed. Cir. 2003); *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983).

Also, note that any comparison must be based on the closest prior art, not on applicant's own choice as in the instant tables 1 and 2.

Again, Bugosh is cited to show the instant aspect ratios and a dimension, not a composition and other properties as asserted by applicant. Also, the instant claims are silent as to the composition of the coatings and paints other than well known generic polymeric emulsion and the utilization of said polymeric emulsion in said coatings and paints is well known in the as taught by the various art of record. Contrary to applicant's assertion, Bugosh teaches the use of 1-40% of boehmite in aqueous acrylic paints at col. 29, lines 1-21 and a paint has a basic pH as evidenced by the teaching of Elsik et al which activates the boehmite.

Again, with respect to applicant's assertion with respect to the activated boehmite particles, the instant invention is directed to the composition, not activating the boehmite particles asserted by applicant. Elsik et al teach employing ammonium hydroxide which inherently activates boehmite particles in the paint.

Again, with respect to applicant's assertion with respect to Gernon et al, Gernon et al are cited to show **other properties claimed and well known facts in paints**. The addition of boehmite particles of Bugosh in the paints of Elsik et al would have yielded the instant properties and applicant failed to show otherwise.

With respect to the examiner's statement that a leveling score of 8 is taught for a latex compositions for said table 3, applicant asserts said compositions lack boehmite particles and the sag resistance is not taught. However, the rejection does not rely on boehmite particles in Gernon et al and Gernon et al are cited to show **other properties claimed and well known facts in paints with or without an associative thickener**. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Again, applicant also asserts that (associative) thickeners can influence some of properties such as the viscosity and leveling, and the examiner agrees with applicant. However, Elsik et al teach compositions without associative thickeners. Furthermore, the instant claims permit other thickeners such as colloidal silica and/or non-associative thickeners which would influence the viscosity and leveling.

Again, rejection is based on the addition of boehmite particles taught by Bugosh in the paint of Elsik et al, and applicant failed to show any unexpected result. Again, see *In re Marosi*, 710 F.2d 799, 803 (Fed. Cir. 1983); *In re Clemens*, 622 F.2d 1029, 1035-36 (CCPA 1980); *In re Peterson*, 315 F.3d 1325, 1330-31 (Fed. Cir. 2003); *In re Grasselli*, 713 F.2d 731, 743 (Fed. Cir. 1983).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H. Yoon whose telephone number is (571) 272-1128. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tae H Yoon/
Primary Examiner
Art Unit 1796

THY/August 3, 2010